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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,359	12/29/1999	JEFF C. MORRISS	INTL-0294-US	2154

7590 09/14/2005

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EXAMINER	
KIM, KEVIN	
ART UNIT	**PAPER NUMBER**
2638	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/474,359	MORRISS, JEFF C.	
	Examiner	Art Unit	
	Kevin Y. Kim	2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-28 and 35-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20-23,25-28 and 43-47* is/are allowed.

6)☒ Claim(s) *24,35-37,40-42* is/are rejected.

7)☒ Claim(s) *38 and 39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 24 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed limitation is not understood. The pulse train is generated using the data bit signal and strobe signal according to base claim 1. Thus, the meaning of "causing the data bit signals to indicate a predetermined data pattern" is not understood at all.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 35-37,40,42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al in view of Sharman et al and Dabral (all previously cited).

Claims 35,40,42.

Tamura et al discloses a method of skew correction, see Figs. 11 and 14, using a data bit signal (DD) and a first strobe signal (the second input to the phase comparator) to generate a control signal (see the output of the phase comparator 5301) to regulate a timing relationship between the data bit signal and the first strobe signal (see the delay chain 5302,5303 controlling the strobe signal). And yet Tamura et al is silent on the characteristics of the control signal

indicating the skew between the data and clock signals as opposed to the claimed "at least one pulse train signal" the duty cycle of which increase or decrease with an increase or decrease of the skew. Tamura et al simply shows a control signal from the phase comparator to the dotted box representing a delay chain circuit. In other words, the patent failed to expressly teach exactly how the output of the comparator controls the delay of the clock signal. However, considering that all phase detectors produce an output signal proportional in magnitude or duty cycle, as established by Sharman et al at col.6, ll.25-28, and Tamura et al does not exclude either type, a phase detector producing a square wave signal whose duty cycle proportionally represents the skew between the data bit signal and the strobe signal would have been one of two possible options. Furthermore, Debral teaches using the duty-cycle modulated signal to control variable delay circuit. See col.4, ll. 48- 55 and Fig.5. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a phase comparator that produces a pulse train whose duty cycle indicates the skew of two inputs, as taught by Dabral, as an actual implementation of the phase comparator of Tamura et al because such a phase comparator is one of two well known phase comparators as evidenced by Sharman.

Claim 36.

The phase detector stores a calibration value indicative of the degree of skew.

Claim 37.

Tamura et al teaches delaying "a second strobe signal" (clk) based on the skew or "a calibration value."

Allowable Subject Matter

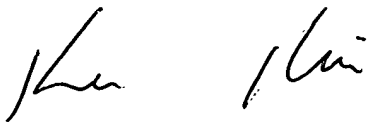
5. Claims 20-23,25-28,43-47 are allowed.

6. Claim 38,39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KEVIN KIM
PATENT EXAMINER